AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of generating routing information in a data communications network having, as elements, nodes and links, the method comprising the steps performed at a first network element of:

   receiving at the first network element information relating to a change in the network at a second network element,

   identifying a sequence in which updating of routing information at each element in the network should occur,

   for each network element in the network, computing a ~~non-measured~~ delay that is proportional to ~~a distance~~ ~~to~~ a number of hops from that network element to a furthest upstream of its children multiplied by a configurable delay value ~~from the first network element~~, and

   after waiting for a time equal to the ~~non-measured~~ delay, updating the routing information at the first element in the sequence.

2. (Currently Amended) A method as claimed in claim 1, wherein the step of identifying sequence comprises:

   determining a new shortest path through the network from the first network element for each network element in the network; and

   after waiting for a time equal to the ~~non-measured~~ delay, updating routing information for the first network element based on the new shortest path for the first network element.

3. (Canceled)

4. (Previously Presented) A method according to claim 2 wherein the delay for each network element in the network is proportional to the number of hops between the first network element and that network element.

5. (Previously Presented) A method according to claim 2 further comprising determining whether the information relating to the second network element indicates an increase in a cost metric for the second element.

6. (Previously Presented) A method according to claim 2 further comprising determining whether the information relating to the second network element indicates a decrease in a cost metric for the second element.

7. (Currently Amended) A method of generating routing information in a data communications network, the method comprising,

   receiving at a first network element information relating to a second network element;

   determining whether the information relating to the second network element indicates a change in the network;

   when information relating to the second network element indicates a change in the network, determining a new shortest path through the network from the first network element for each network element in the network;

   for each network element in the network, computing a ~~non-measured~~ delay that is proportional to ~~a distance~~ ~~to~~ a number of hops from that network element to a furthest upstream of its children multiplied by a configurable delay value ~~from the first network element~~; and

   after waiting for a time equal to the ~~non-measured~~ delay, updating routing information for the first network element based on the new shortest path for the first network element.

8. (Canceled)

9. (Currently Amended) An apparatus for generating routing information in a data communications network having as elements nodes and links, comprising

   means for receiving at a first network element information relating to a change in the network at a second network element, means for identifying a sequence in which updating of routing information at each element in the network should occur,

means for computing for each network element in the network, a ~~non-measured~~ delay that is proportional to ~~a distance~~ ~~to~~ a number of hops from that network element to a furthest upstream of its children multiplied by a configurable delay value ~~from the first network element~~, and

means for updating the routing information at the first element in the sequence after waiting for a time equal to the ~~non-measured~~ delay.

10. (Currently Amended) An apparatus as claimed in claim 9, wherein the means for identifying the sequence comprises:

determining_ a new shortest path through the network from the first network element for each network element in the network; and

after waiting for a time equal to the ~~non-measured~~ delay, updating routing information for the first network element based on the new shortest path for the first network element.

11. (Canceled)

12. (Previously Presented) An apparatus according to claim 10 wherein the delay for each network element in the network, is proportional to the number of hops between the first network element and that network element.

13. (Previously Presented) An apparatus according to claim 10, further comprising means for determining whether the information relating to the second network element indicates an increase in a cost metric for the second element.

14. (Previously Presented) An apparatus according to claim 10 further comprising means for determining whether the information relating to the second network element indicates a decrease in a cost metric for the second element.

15. (Currently Amended) An apparatus for generating routing information in a data communications network, the apparatus comprising:

    means for receiving at a first network element information relating to a second network element;

    means for determining whether the information relating to the second network element indicates a change in the network;

    means for determining a new shortest path through the network from the first network element for each network element in the network when information relating to the second network element indicates a change in the network; and

    means for computing for each network element in the network, a ~~non-measured~~ delay that is proportional to ~~a distance~~ ~~to~~ a number of hops from that network element to a furthest upstream of its children multiplied by a configurable delay value ~~from the first network element~~, and

    means for updating routing information for the first network element based on the new shortest path for the first network element after waiting for a time equal to the ~~non-measured~~ delay.

16. (Canceled)

17. (Currently Amended) An apparatus for generating routing information in a data communications network having, as elements, links and nodes, the apparatus comprising:

    one or more processors;

    a network interface communicatively coupled to the processor and configured to communicate one or more packet flows among the processor and a network; and

    a computer readable medium comprising one or more sequences of instructions for generating routing information which instructions, when executed by one more processors, cause the one or more processors to generate routing information in a data communications network having, as elements, nodes and links, performing the steps at a first network element of:

receiving at the first network element information relating to a change in the network at a second network element,

identifying a sequence in which updating of routing information at each element in the network should occur,

for each network element in the network, computing a ~~non-measured~~ delay that is proportional to ~~a distance~~ ~~to~~ a number of hops from that network element to a furthest upstream of its children multiplied by a configurable delay value ~~from the first network element~~, and

after waiting for a time equal to the ~~non-measured~~ delay, updating the routing information at the first element in the sequence.

18. (Currently Amended) The apparatus of claim 17, wherein identifying the sequence comprises:

determining a new shortest path through the network from the first network element for each network element in the network; and

after waiting for a time equal to the ~~non-measured~~ delay, updating routing information for the first network element based on the new shortest path for the first network element.

19. (Canceled)

20. (Previously Presented) The apparatus of claim 18, wherein the delay for each network element in the network, is proportional to the number of hops between the first network element and that network element.

21. (Previously Presented) The apparatus of claim 18, further comprising determining whether the information relating to the second network element indicates an increase in a cost metric for the second element.

22. (Previously Presented) The apparatus of claim 18, further comprising determining whether the information relating to the second network element indicates a decrease in a cost metric for the second element.

23. (Currently Amended) An apparatus for generating routing information in a data communications network having, as elements, links and nodes, the apparatus comprising:

one or more processors;

a network interface communicatively coupled to the processor and configured to communicate one or more packet flows among the processor and a network; and

a computer readable medium comprising one or more sequences of instructions for generating routing information which instructions, when executed by one more processors, cause the one or more processors to generate routing information in a data communications network, performing the steps comprising;

receiving at a first network element information relating to a second network element;

determining whether the information relating to the second network element indicates a change in the network;

when information relating to the second network element indicates a change in the network, determining a new shortest path through the network from the first network element for each network element in the network;

for each network element in the network, computing ~~a non-measured~~ delay that is proportional to ~~a distance~~ ~~to~~ a number of hops from that network element to a furthest upstream of its children multiplied by a configurable delay value ~~from the first network element~~; and

after waiting for a time equal to the ~~non-measured~~ delay, updating routing information for the first network element based on the new shortest path for the first network element.

24. (Currently Amended) A computer readable storage medium storing one or more sequences of instructions for a data communications network having as elements links and nodes, which instructions, when executed by one or more processors, cause the one or more processors to generate routing information in a data communications network having, as elements, nodes and links, performing the steps at a first network element of:

receiving at the first network element information relating to a change in the network at a second network element,

identifying a sequence in which updating of routing information at each element in the network should occur,

for each network element in the network, computing a ~~non-measured~~ delay that is proportional to ~~a distance~~ ~~to~~ a number of hops from that network element to a furthest upstream of its children multiplied by a configurable delay value ~~from the first network element~~, and

after waiting for a time equal to the ~~non-measured~~ delay, updating the routing information at the first element in the sequence.

25. (Currently Amended) The computer readable storage medium of claim 24, wherein the step of identifying the sequence comprises:

determining a new shortest path through the network from the first network element for each network element in the network; and

after waiting for a time equal to the ~~non-measured~~ delay, updating routing information for the first network element based on the new shortest path for the first network element.

26. (Canceled)

27. (Previously Presented) The computer readable storage medium of claim 25, wherein the delay for each network element in the network, is proportional to the number of hops between the first network element and that network element.

28. (Previously Presented) The computer readable storage medium of claim 25, further comprising determining whether the information relating to the second network element indicates an increase in a cost metric for the second element.

29. (Previously Presented) The computer readable storage_medium of claim 25, further comprising determining whether the information relating to the second network element indicates a decrease in a cost metric for the second element.

30. (Currently Amended) A computer readable storage medium storing one or more sequences of instructions for a data communications network having, as elements, links and nodes, which instructions, when executed by one or more processors, cause the one or more processors to generate routing information in a data communications network, performing the steps comprising:

receiving at a first network element information relating to a second network element;

determining whether the information relating to the second network element indicates a change in the network;

when information relating to the second network element indicates a change in the network, determining a new shortest path through the network from the first network element for each network element in the network;

for each network element in the network, computing a ~~non-measured~~ delay that is proportional to ~~a distance~~ ~~to~~ a number of hops from that network element to a furthest upstream of its children multiplied by a configurable delay value ~~from the first network element~~; and

after waiting for a time equal to the ~~non-measured~~ delay, updating routing information for the first network element based on the new shortest path for the first network element.